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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,682	12/12/2003	William Bedingham	59072US002	1223
32692 7590 01/21/2010 3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427				
EXAMINER NAGPAUL, JYOTI				
ART UNIT 1797		PAPER NUMBER		
NOTIFICATION DATE 01/21/2010		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/734,682

Applicant(s)

BEDINGHAM ET AL.

Examiner

JYOTI NAGPAUL

Art Unit

1797

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 30-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 30-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Amendment filed on January 8, 2009 has been acknowledged. Claims 1-10 and 30-41 are pending.

Response to Amendment

Rejection of Claims 1-10 and 30-38 as being rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention has been withdrawn in light of applicants amendments.

Rejection of Claims 1-3, 6-7, 9-10, 30-32, 35, and 39-41 as being anticipated by Kellogg has been modified in light of applicants amendments.

Rejection of Claims 4-5, 8 and 33-34 as being unpatentable over Kellogg has been modified in light of applicants' amendments.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1 and 30 recites the limitation "the distal side of the mixing chamber".

There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

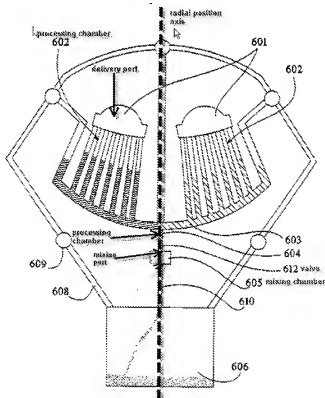
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1-3, 6-7, 9-10, 30-32, 35, and 39-41** are rejected under 35 U.S.C. 102(b) as being anticipated by Kellogg.

Kellogg teaches a microfluidic structure on a microplatform. The structure comprising a process chamber (602 and the area referred to the figure below) comprising a delivery port (601) on a proximal side of the process chamber (602 and the area referred to the figure below) and a valve (612) on a distal side of the process chamber (602). The structure further comprises a mixing chamber (605) comprising a mixing port (refer to figure below). The mixing port (refer to figure below) is located on the distal side of the process chamber (602 and the area referred to the figure below). Kellogg further teaches the distal side of the mixing chamber (605) is located at the same radial position or radially inward of the distal side of the process chamber (602 and the area referred to the figure below). Kellogg further teaches rotation of the sample processing device about an axis of rotation moves at least a portion of sample material in the process chamber (602 and the area referred to the figure below) into the mixing chamber (605) through the mixing port when the mixing port is open. Additionally, the proximal side of the process chamber (602 and the area referred to the figure below) is located closer to the axis of rotation than the distal side of the process chamber (602 and the area referred to the figure below). Kellogg teaches the valve (612) of the process chamber (602) is open, rotation of the sample processing device about the axis of rotation moves the sample material out of the process chamber (602 and the area referred to the figure below) and the mixing chamber (605). It appears that the valve of the process chamber is normally-closed. Further, a radial axis extends through the

proximal side and the distal side of the process chamber (602 and the area referred to the figure below). It appears, when taken a cross section of the device, the process chamber is located between a first major side, referred to as one side of the microplatform, and a second major side, referred to as another side of the microplatform, of the sample processing device. Applicant's further recite "the valve is closed when rotation of the sample processing device about an axis of rotation moves at least a portion of sample material in the process chamber into the mixing chamber", this a functional limitation and is of no patentable significance in device claims. Kellogg teaches all the structural limitations and is therefore the valve is capable of performing the intended function. (See Col. 22, Lines 64-68)



Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. **Claims 4-5, 8 and 33-34** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kellogg.

Refer above for the teachings of Kellogg.

With respect to claims 4 and 33, Kellogg fails to teach the radial axis intersects the axis of rotation and the radial axis extends through the delivery port and the valve of the process chamber.

With respect to claims 5 and 34, Kellogg fails to teach at least a portion of the mixing chamber is located in a tangential direction off to a side of the process chamber relative to the radial axis.

With respect to claim 8, Kellogg fails to teach the mixing port comprises a valve and the valve of the mixing port is closed.

With respect to Claims 4-5 and 33-34, it appears applicants' disclose no specific function or change in operation of the device with respect to the radial axis intersecting the axis of rotation and the radial axis extends through the delivery port and the valve of the process chamber, therefore it appears that it is a matter of design choice.

Additionally, with respect to at least a portion of the mixing chamber is located in a tangential direction off to a side of the process chamber relative to the radial axis. Therefore, it would have been obvious to one having ordinary skill in the art to provide the device of Kellogg with the radial axis extends through the delivery port and the valve of the process chamber and at least a portion of the mixing chamber is located in a tangential direction off to a side of the process chamber relative to the radial axis.

With respect to claim 8, Kellogg teaches various embodiments and designs of the sample processing device. Kellogg discloses in Figure 18A, a mixing chamber (655) and a valve (662) located at the mixing port. It would have been obvious to one having ordinary skill in the art to provide the device of Kellogg with a valve at the mixing

port to achieve the predictable results of further ensuring complete mixing of the solutions.

Response to Arguments

9. Applicant's arguments filed on January 8, 2009 have been fully considered but they are not persuasive. Applicants argue that Kellogg does not teach that the distal side of the mixing chamber is located at the same radial position or radially inward of the distal side of the process chamber. Examiner respectfully disagrees and has shown this in the figure in the above rejection. In response to that the process chamber is located between a first major and second major side of the sample processing device and wherein at least apportion of the mixing chamber is located between the process chamber and the second major side of the sample processing device. Examiner respectfully disagrees. A first major and second major side can be identified anywhere in the device of Kellogg not only the cross section of the device of Kellogg. Applicants' merely claim a first and second major side which defines any two locations of the device of Kellogg.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JYOTI NAGPAUL whose telephone number is (571)272-1273. The examiner can normally be reached on Monday thru Friday (10:00-7:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jyoti Nagpaul/
Examiner, Art Unit 1797